

REMARKS

Reconsideration and allowance of this application are respectfully requested.

By this Amendment, claim 55 is amended and claim 57 is canceled.

Claims 1-54 and 69-72 were previously canceled.

It should be appreciated that the Applicant has not invoked 35 U.S.C. §112, paragraph 6 with respect to any term in any claim of the present application.

No new matter has been added by these amendments.

Claims 55, 56, 58-68 and 73-86 are pending in this application.

THE PRIOR ART REJECTIONS

In the Final Office Action (mailed 08/20/2010 – hereinafter the “Final Office Action”), the Examiner rejected claims 55, 57-61, 63-68, 73-82, and 85 under 35 U.S.C. § 103(a) as being unpatentable over Kano et al. (U.S. Patent No. 6,310,858 – hereinafter “Kano”) in view of Callon et al. (U.S. Patent No. 5,854,899 – hereinafter “Callon”). The Examiner also rejected claims 56, 62, 83-84, and 86 under 35 U.S.C. §103(a) as being unpatentable over Kano and Callon as applied to claims 55, 59, 81, 85, and further in view of McCanne (U.S. Patent No. 6,611,872 – hereinafter “McCanne”). The grounds for these rejections are respectfully traversed.

THE REJECTIONS OVER KANO IN VIEW OF CALLON

Generally speaking, each of the claims recites at least one embodiment of Applicant’s invention in which a table that causes content to be routed to a first path is modified (or configurable to be modified) after an elapsed amount of time to cause content to be routed to a second path.

As recited in independent **claim 55**, this invention is a method for transmitting content in a communications network. The method of claim 55 includes:

(A) configuring a table to cause content to be routed over a first path in said communications network;

(B) analyzing whether a specified amount of time has elapsed relative to the transmission of content via the first path.

According to the Examiner, Kano teaches a method for transmitting content in a communications network. More specifically, according to the Examiner, Kano teaches the claimed acts (A) and (B) (of claim 55). Claim 55 further recites: “(C) based at least in part on the analyzing step (B), modifying the table to cause content to be routed over a second path in said communications network.”

The Examiner first states that Kano teaches “(C) based at least in part on the analyzing step (B), modifying the table to cause content to be routed in said communications network [citations omitted].” The Examiner acknowledges, however, that Kano fails to teach that the content is routed over a second path.

The Examiner then applies Callon, allegedly “in the same field of endeavor having closely related objectivity, [to] teach[] content is routed over a second path (i.e. it is considered as an alternative path) [col. 16, lines 31-38].” *Final Office Action*, at 2. The Examiner states that:

it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated Callon's teachings of content is routed over a second path, in the teachings of Kano in routing system, for the purpose of help to manage paths in a manner that provides for efficient network operation and minimizes the delay when forwarding data.

Id. at 3.

Kano relates to a frame relay system. *Kano*, Abstract. Kano is trying to solve a particular problem that can occur when routing tables are updated in frame relay systems. *Id.* C3L16-23. Specifically, Kano is trying to prevent frames from being circulated in a frame relay system, especially during an update of such systems. *Id.*, C4L39-42, C4L59-65. In order to achieve this result, Kano uses the TTL field in a frame and a timer 24 to determine whether a period of time “has

elapse from a time at which an entry was formed or updated in ... [a] routing table.” *Id.* C8L45-58. Essentially Kano only decrements the TTL field if a routing table update is taking place, otherwise the TTL field is left alone. Specifically, Kano uses a timer to determine if a predetermined amount of time has passed since a routing table update began. If so, then the update to the routing table is considered complete. *Id.* Using this approach, a particular frame is either relayed (with its TTL decremented), or that frame’s circulation is stopped (because its TTL will reach zero). *Id.* C9L11-24. In cases where the routing table is not changed, the TTL value in a frame is not decremented. *Id.* C9L25 *et seq.*

According to the Examiner, Kano teaches the claimed acts (A) and (B) (of claim 55).

First, however, although Kano starts a timer when a path is being updated, Kano does not teach or in any way suggest “analyzing whether a specified amount of time has elapsed *relative to the transmission of content via the first path*,” as claimed. The predetermined amount of time that Kano allocates to a table update is not, in any way, a measure of the amount of time elapsed relative the transmission of content via a path in that table.

Second, claim 55 also recites: “(C) based at least in part on the analyzing step (B), modifying the table to cause content to be routed over a second path in said communications network.” Kano teaches no such modifying. To the contrary, Kano uses a timer to set an upper limit on the amount of time that an ongoing modification can take. Once that limit is reached, Kano assumes that the modification is done. Claim 55 has been amended to clarify that modifying the table to cause content to be routed over a second path in said communications network occurs “when said specified amount of time has elapsed relative to the transmission of content via the first path.” To the extent Kano does anything to the path (which applicant does not concede), Kano stops any changes to the table after a predetermined amount of time.

Callon teaches a system for managing virtual circuits. *Callon*, Abstract. The mere fact that Callon mentions alternate paths (*Callon*, C16L31 *et seq.*) does not in any way suggest that such paths could in some way be combined with Kano to produce the presently claimed invention.

For at least these reasons, claim 55 (and its dependents) are patentable over Kano in view of Callon.

Independent **claim 59** recites a node in a communications network, the node including a first port operable to receive content destined for a destination node in the communications network; one or more output ports operable to transmit content to at least a first path in the communications network and a second path in the communications network; and a table configurable to cause content received at the first port to be selectively transmitted from the one or more output ports to either the first path or the second path in response to instructions derived from an analysis of an amount of elapsed time during which the table has been configured such that content has been transmitted from the one or more output ports to a current path.

The Examiner again applies Kano and Callon, supposedly to teach this claim. According to the Examiner, Kano teaches a node in a communications network, the node comprising:

a first port (i.e. port #1) operable to receive content destined for a destination node in the communication network (i.e. network 1) ...;
one or more output ports (i.e. port #2) operable to transmit content to at least a first path (i.e. a path is corresponding to a destination address for routing) in said communications network (i.e. network 1) ...; and
a table (i.e. routing table 21A) configurable to cause content received at the first port to be selectively transmitted from the one or more output ports to either the first path in response to instructions derived from an analysis of an amount of elapsed time during which the table has been configured such that content has been transmitted from the one or more output ports to a current path

Final Office Action at p. 4-5.

Kano teaches a frame relay device. Frames come in to the device from networks (*e.g.*, network 1) at ports (*e.g.*, port #1), and get sent on to other networks (*e.g.*, network 2) via ports (*e.g.*, port #2). *Kano*, Fig. 6 and related description. Whatever routing information Kano uses, he does not teach or in any way suggest selectively transmitting a frame “to either the first path or the second path in response to instructions derived from an analysis of an amount of elapsed time during which the table has been configured such that content has been transmitted from the one or more output ports to a current path.” In Kano a particular port is selected and the frame is sent to that port. Furthermore, Kano does not select different ports depending on any amount of time elapsed “during which the table has been configured such that content has been transmitted from the one or more output ports to a current path,” as claimed.

The Examiner acknowledges the deficiencies in Kano and applies Callon to supposedly overcome these deficiencies. According to the Examiner,

Kano fails to teach content is routed over a second path. However, Callon, in the same field of endeavor having closely related objectivity, teaches content is routed over a second path (*i.e.* it is considered as an alternative path) [col. 16, lines 31-38].

Final Office Action at p. 5.

Once again, the mere fact that Callon mentions alternate paths (*Callon*, C16L31 *et seq.*) does not in any way suggest that such paths could in some way be combined with Kano to produce the presently claimed invention.

For at least these reasons, **claim 59** (and its dependents) are patentable over Kano in view of Callon.

Independent **claim 64** recites a method for transmitting content in a communications network, wherein a table entry is configured to cause content to be transmitted via a first path in the communications network. As recited in claim 64, the method includes (A) comparing an elapsed time associated with

transmitting content via the first path with a threshold amount of time; and (B) modifying the table to cause content to be transmitted via a second path in the communications network as a result of the comparing step (A) when the elapsed time associated with transmitting content via the first path exceeds the threshold amount of time.

As noted above, Kano (alone or in any proposed combination with Callon) does not modify a table “when the elapsed time associated with transmitting content via the first path exceeds the threshold amount of time.”

For at least these reasons, **claim 64** (and its dependents) are patentable over Kano in view of Callon.

Independent **claim 65** recites a method for transmitting content in a communications network. As recited in claim 65, the method includes:

(A) configuring a table to cause content be routed to a first path in the communications network;

(B) analyzing an elapsed time associated with transmitting content via the first path against a threshold amount of time;

(C) modifying the table to cause content to be routed to a second path in the communications network based on analysis of the elapsed time against the threshold amount of time;

(D) subsequent to the modifying step (C), analyzing a cost associated with transmitting content via the second path against a threshold cost;

(E) modifying the table to cause content to be routed to a path distinct from the second path based on analysis of the cost against the threshold cost.

Kano (alone or in any proposed combination with Callon) fails to teach or suggest the invention of claim 65.

First, as noted above, Kano does not teach or suggest “analyzing an elapsed time associated with transmitting content via the first path against a threshold

amount of time,” as recited in the claim. Kano starts a timer when a path update begins so that he can prevent frames from circulating.

Second, as also noted above, Kano does not teach or suggest the claimed “modifying the table to cause content to be routed to a second path in the communications network based on analysis of the elapsed time against the threshold amount of time.”

Furthermore, the Examiner acknowledges that:

Kano fails to teach content is routed over a second path; and analyzing a cost associated with transmitting content via the second path against a threshold cost; and the content to be routed to a path distinct from said second path based on analysis of the cost against the threshold cost. However, Callon, in the same field of endeavor having closely related objectivity, teaches content is routed over a second path (i.e. it is considered as an alternative path) ...; and analyzing a cost (i.e. a cost calculated for a path) associated with transmitting content via the second path against a threshold cost (i.e. optimal cost of the optimal path) ...; and the content to be routed to a path (i.e. a new path or new virtual circuit) distinct from said second path based on analysis of the cost against the threshold cost ...].

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated Callon's teachings of content is routed over a second path; and analyzing a cost associated with transmitting content via the second path against a threshold cost; and the content to be routed to a path distinct from said second path based on analysis of the cost against the threshold cost, in the teachings of Kano in routing system, for the purpose of help to manage paths in a manner that provides for efficient network operation and minimizes the delay when forwarding data.

Final Office Action at p. 7-8.

Again, even if Callon teaches the choosing between paths, there is still nothing in Callon to teach or suggest the claimed: “(D) subsequent to the modifying step (C), analyzing a cost associated with transmitting content via the second path against a threshold cost; [and] (E) modifying the table to cause

content to be routed to a path distinct from the second path based on analysis of the cost against the threshold cost.”

Applicant notes that the Examiner has failed to state how Callon and Kano would be combined. The mere mention of a timer in Kano and an alternate path in Callon does not mean that these two features would somehow come together to form the presently claimed invention.

For at least these reasons **claim 65** (and its dependents) are patentable over Kano in view of Callon.

Independent **claim 81** recites a method for transmitting content in a communications network. As recited in claim 81, the method includes (A) configuring a table to cause content to be routed via a first path in the communications network, the first path having been determined based at least in part on a first cost associated with transmitting content via the first path; and (B) based at least in part on how much time has elapsed since the configuring in step (A), modifying the table to cause content to be routed via a second path in the communications network, the second path having been determined based at least in part on a second cost associated with transmitting content via the second path.

Claim 81 and its dependents are patentable over Kano and Callon for similar reasons to those given for the other claims above.

Independent **claim 85** recites a method for transmitting content in a communications network. As recited in claim 85, the method includes: (A) configuring a table to cause content to be routed to a first node, a first network comprising the first node; and then, after a specified amount of time has passed since the configuring, (B) modifying the table to cause content to be routed to a second node, a second network comprising the second node, and the second node being distinct from the first node, wherein the communications network comprises the Internet and wherein communication among nodes on the first network uses an

Internet protocol, and communication among nodes on the second network uses at least the Internet protocol.

Claim 85 and its dependent (claim 86) are patentable over Kano and Callon for similar reasons to those given for the other claims above.

THE REJECTIONS OVER KANO AND CALLON IN VIEW OF MCCANNE

The Examiner rejected claims 56, 62, 83-84, and 86 under 35 U.S.C.

§103(a) as being unpatentable over Kano and Callon as applied to claims 55, 59, 81, 85, and further in view of McCanne.

As to claim 56, the Examiner acknowledges, that:

Kano and Callon fail to teach an overlay forwarding path. However, McCanne, in the same field of endeavor having closely related objectivity, teaches an overlay forwarding path ...

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated McCanne's teachings of an overlay forwarding path, in the teachings of Kano and Callon, for the purpose of provide a widely deployed communication protocols and procedures to achieve efficient transfer or routing of information.

The Examiner applies the same argument to claim 62.

As to claim 83, the Examiner again acknowledges that:

Kano and Callon fail to teach overlay node. However, McCanne, in the same field of endeavor having closely related objectivity, teaches overlay node (i.e. overlay router) ...

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated McCanne's teachings of overlay node, in the teachings of Kano and Callon, for the purpose of provide a widely deployed communication protocols and procedures to achieve efficient transfer or routing of information.

Similarly, as to claim 84, the Examiner acknowledges that:

Kano and Callon fail to teach overlay node. However, McCanne, in the same field of endeavor having closely related objectivity, teaches overlay node (i.e. overlay router)

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated McCanne's teachings of overlay node, in the teachings of Kano and Callon, for the purpose of provide a widely deployed communication protocols and procedures to achieve efficient transfer or routing of information.

And similarly, as to claim 86, the Examiner again acknowledges the deficiencies in Kano and Callon and states:

Kano and Callon fail to teach overlay paths. However, McCanne, in the same field of endeavor having closely related objectivity, teaches overlay paths ...

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated McCanne's teachings of overlay paths, in the teachings of Kano and Callon, for the purpose of provide a widely deployed communication protocols and procedures to achieve efficient transfer or routing of information.

Claim 56, 62, 83, 84, and 86 depend from claims 55, 59/60/61, 81, and 85, each of which is patentable over Kano and Callon (as shown above). McCanne does not overcome the deficiencies in Kano or Callon.

For at least these reasons, 56, 62, 83, 84, and 86 are patentable over any proposed combination of Kano, Callon and McCanne.

THE EXAMINER'S RESPONSE TO PREVIOUS ARGUMENTS

In the section titled "Response to Arguments" of the present Office Action, the Examiner states:

Applicant's arguments filed 6/4/10 have been fully considered but they are not persuasive.

Applicant's arguments with respect to claims 55-68, 73-86 have been considered but are moot in view of the new ground(s) of rejection.

The Examiner is respectfully requested to clarify which aspect of Applicant's response was not persuasive.

CONCLUSION

For at least the foregoing reasons, Applicant respectfully requests reconsideration of the present application. If the Examiner believes any issues could be resolved via a telephone interview, the Examiner is invited to contact the undersigned at the telephone number listed below.

Aside from the electronically submitted fees for the extension fees and the additional claims, no fees are believed due concurrently with the filing of this Amendment. Should any additional fees be required, please consider this a request therefor and authorization to charge Deposit Account No. 50-5063 as necessary.

Respectfully submitted,

January 20, 2011
Date: _____

/David. D. Wier /

David D. Wier, Attorney Reg.No. 48,229
Level 3 Communications, LLC
1025 Eldorado Blvd.
Broomfield, CO 80021
(720) 888-3539